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ABSTRACT

This paper is concerned with the conceptual problems of developing an administrative planning system for local school districts. Specific planning procedures will be published later as part of a completed PPBS model. Definitions of certain concepts lead to a "Typology of Planning Behavior," which distinguishes three levels of planning and planning behavior: (1) system planning at the political or community level, which involves the community and the school district; (2) system planning at the operational level by the school system as a whole; and (3) subsystem planning utilizing individual teachers in preparing specific objectives. System planning at the political level is primarily an explication of the community's long-range goals for education. System planning at the operational level involves a statement of more explicit objectives and the setting of target dates. Subsystem planning incorporates actual subject area programs and program elements to meet quantitatively stated objectives within a precisely defined time span. Three previous papers are: ED 028 539, ED 028 540, and ED 033 447. (DE)

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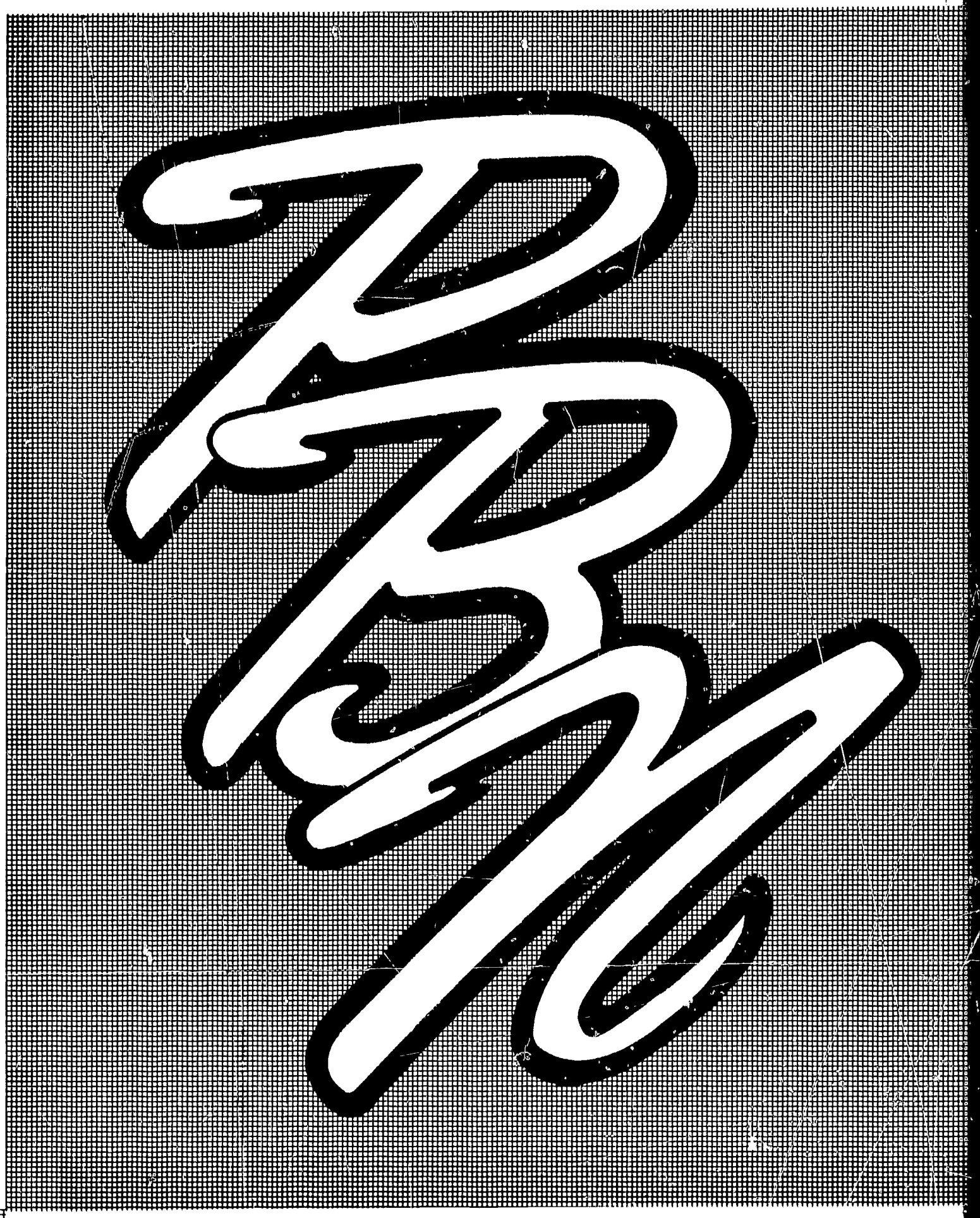

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DEVELOPMENT OF AN OPERATIONAL MODEL FOR THE APPLICATION OF PLANNING-PROGRAMMING-BUDGETING SYSTEMS IN LOCAL SCHOOL DISTRICTS

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INTRODUCTION

Although this is the fourth in a series of Notes dating back to October 1968, it is the first Note published since funding of the project to develop an operational model for the application of Planning-Programming-Budgeting Systems (PPBS) to local school districts by the New York State Department of Education under provisions of Title III of the Elementary and Secondary Education Act.

The award was granted to the Maryvale School District, and Maryvale has engaged the Western New York School Development Council as prime contractor in the development of the operational model. The funding is for only one year, July 1, 1969 to June 30, 1970, although the original plan was for a three-year project. Year one called for development of the model, and the model was to be subsequently pilot tested by Maryvale during years two and three. This is still our intent, but continuation of the project into years two and three will depend upon continued sources of outside funding.

During the Title III funded period, the Development Council will continue to publish PPB Notes. A slight change in emphasis will be evident as the Notes make more specific references to the nature of the PPBS model being developed.

This Note is concerned with the conceptual problems of developing an administrative planning system for local school districts. Such a system must take into account the requirements of a PPB system and the personnel, financial, and physical constraints present in school districts. This may preclude development of the "best possible" or "ideal" planning system. Specific planning procedures are not reported here. They will be published as part of a completed PPBS model which will be ready for dissemination by July 1, 1970.

Personnel involved in the development of the model need feedback from the field about the ideas which these Notes report and which, to a large extent, are guiding us in the development of the model. We encourage your reactions--critical or otherwise--to the material presented in these Notes. The title page to this Note contains information about how to communicate with us.

THE CONCEPTUAL BASES FOR THE DEVELOPMENT OF AN ADMINISTRATIVE PLANNING SYSTEM FOR LOCAL SCHOOL DISTRICTS

Planning-Programming-Budgeting Systems (PPBS) will be implemented by local school districts after officials of local school districts are convinced that the administrative elements which make up PPBS will contribute to improved decision making. In general, these officials will have become convinced that by adopting the procedures of a PPB system they can be more certain that resource-allocation decisions make sense in terms of educational needs and priorities. PPBS should help to remove some of the uncertainty about whether or not the school district is being run efficiently. "Efficiency" in this context does not mean that the cost of running the district will be reduced; rather, it means that available resources are being allocated among competing educational programs on the basis of where the greatest educational needs are.

Fundamentals of PPBS

The following general elements of a PPB system are implied by this notion.

1) Leaders of a district have data available which enable them to arrive at a consensus as to what the needs of their particular district are.

2) This identification of needs has led to the formulation of a series of statements of objectives which, when achieved, will eliminate those needs.

3) A program structure has been deduced from the stated objectives, and each program has sub-objectives specified for it.

4) Alternative sets of activities to achieve the objectives of each program have been designed. The set of activities which, upon analysis, appears to offer the most benefit, in terms of program objectives, at the

least cost will be selected for execution. Greater perspective of benefit and of cost will be gained if both are projected into the future (e.g., five years) before a decision is made.

5) The results of program activities will be compared with the expectations for each program. This analysis will provide the rationale for support of the status quo or for change in the activities supported by the limited resources of the school district.

Action Orientation

These elements of a PPB system are action-oriented in two senses: first, PPBS is an active system; and second, the subject matter of PPBS is what personnel of the district will be doing in the future.

A PPB system designed for a local school district will not be a system which lies dormant until a warning device triggers it. Rather, it will involve regular activity on the part of specified individuals within the framework of a definite time schedule. Data will need to be collected on a regular basis, analyses will have to be completed before a specified date, and decisions about educational programs and resource allocation will have to be made in time for the completion of each year's budget. A PPB system will continuously interact with--and act upon--the larger school system of which it will be an integral part.

The second way in which PPBS is an action-oriented system gives focus to one of the key processes involved in its implementation, and illuminates some of the issues surrounding the process. The process of interest here is planning. The decision to adopt PPBS implies that those who have made the decision believe that it is somehow possible to influence future activities of school district personnel,

and that the direction of this influence will benefit the district's educational program. An assumption for the implementation of PPBS must be that we can allow our reason to intervene upon the on-going activities of the school district and alter those activities so that their outputs are different from what they would have been had we not so intervened. This assumption is useful in the selection of a definition for the process of planning, which is a key component of a PPB system. The definition which follows was prepared by Dror (1967): "Planning is the process of preparing a set of decisions for action in the future, directed at achieving goals by optimal means" (p. 99). Planning is tied to the decision to sponsor specific activities at specific times in the future to achieve explicit goals by maximizing the benefit derived from the expenditure of available resources. The process of planning in a PPB system is tied to action.

Scope of Planning Activity

The definition of planning suggested above is general enough to include the planning which is undertaken by a teacher preparing for a specific class and to include the planning which the chief school officer and board members undertake in the preparation of the next year's budget. However, in designing a planning system for a school district, we must admit that the specifics of the planning process in each of the examples will exhibit some real differences. Empirical study of the nature of planning as an administrative science has been severely limited in the past, and one does not have an accepted body of normative data to consult as one designs a planning system. Instead, guidance for the design of a planning system can only come from the relatively few available attempts to construct theoretical planning

models and from common sense and intuition. The operation of planning systems so derived will themselves generate empirical data which in turn can be used to refine theoretical understanding of the administrative process of planning.

It makes intuitive sense to suppose that there will be differences between the planning practiced by a classroom teacher and that practiced by a board of education. We must, however, give concrete expression to these insights as we construct a specific administrative planning system.

Friedmann (1967) distinguishes between different types of planning. The distinctions which he makes are useful in the design of a planning system for local school districts. Friedmann places different types of planning on a continuum from developmental planning at one end to adaptive planning on the other. The major distinction he makes between the ends of the continuum is that on the developmental end there is a high degree of autonomy with regard to the selection of ends for the activity which is the subject matter of the planning; while on the adaptive end of the continuum, planning is dependent upon a prior statement of goals. An example of adaptive planning would be planning the highway system of New York State, given a plan for a national system of interstate highways.

Friedmann's continuum distinguishes between the presence or absence of goal-setting autonomy and takes into account the scope of the activities within an organization which are to be affected by the plan. We will carry these distinctions into our planning system for local school districts, and our continuum will be from system planning on one end to subsystem planning on the other. The boundaries for activities on the subsystem end of the continuum will be those of program elements*;

*See Appendix A for definitions of Program Structure, Programs, and Program Elements.

however, in actuality, the subsystem end of the continuum can be stretched to include the planning undertaken by one teacher for the progress of one student in a specific subject.

Planning Behavior

Another variable, in addition to the scope of activity influenced by the planning, is the type of thinking which generates a statement of objectives and a specific plan of action. Distinctions made by Friedmann (1967) are again useful as a point of departure. He suggests that there are two major types of thinking, rational and extra-rational; and rational thinking can be either bounded or non-bounded. The dominant mode of thinking will influence both the style of planning and the behavior of the planners.

Bounded rationality is thought which is rational to the extent permitted by organizational and environmental conditions. Some examples of conditions limiting the extent to which planning decisions can be rational are:

1) the efficiency and reliability of available information systems,

2) the number and diversity of organized interest groups,

3) the susceptibility of the bureaucracy to change,

4) the degree to which decisions external to the organization will influence the outcome of organization activities.

The effort to be rational is, in a sense, analogous to an effort to be technical and scientific. Uncertainty in planning is reduced proportionally to the extent that the plan can be based on scientifically gathered information and to the extent that the

activities in question can be controlled. If the planners were certain that they possessed all the relevant information available and that it was reliable, and if they were equally certain that they could completely control the conduct of the activity in question, the plan could be completely rational. This is not possible in any social organization, and it is especially not possible in an organization as complex as a school system. Planning procedures developed for use by a local school district should explicitly recognize that rationality is bounded and should strive to narrow the margins of uncertainty in the planning process.

Non-bounded rationality refers to utopian and ideological thought. Such thinking exerts a particularly strong influence on the activity of a school district. Indeed, there is a close relationship between American ideology and the rationale for our free, universal system of public education. The enormous expenditure of resources for education in our democracy represents a major effort to achieve a utopian vision of a just and peaceful society. Such thinking cannot be divorced from school district planning. A planning system for school districts should focus attention on where in the planning process non-bounded rationality should exert its greatest influence.

Extra-rational thought is generated by tradition, intuition, and wisdom. These are qualities upon which we rely for guidance when we are unable to make scientifically accurate decisions based on hard data and proven theoretical models for decision making. Confidence in extra-rational thought for decision making would probably correlate highly with the decision maker's experience in the domain of the activity at issue. Much of the decision making currently taking place in education

relies on extra-rational thought.

Typology of Planning

The purpose of the foregoing discussion is to lay the groundwork for a typology of planning a component of a model for the application of PPBS to local school districts. The typology presented in Figure 1. summarizes the conceptual bases for these planning procedures.

The planning variables presented above are not as easy to separate from each other and to categorize as a glance at Figure 1. may suggest. For example, there are not pure instances of each type of thinking. We cannot block off our minds and say that we are about to make a decision that is not going to be influenced by a system of beliefs. Figure 1. illustrates which style of thinking dominates at each level of planning. We should not be content to accept an objective for level 3 dominated by level 1 thinking: of what operational use would the objective be to produce good democratic citizens in planning the activities of a social studies program? We cannot know whether or not our social studies program produces a "good citizen," but we can agree on what some observable attributes of good citizenship are. These latter provide us with statements of objectives that are operational and that allow our social studies program to be evaluated.

Hierarchy of Objectives

The typology suggests a hierarchical relationship among the different levels of objectives. It is helpful to regard the statements of objectives at level 1 as being constructs (i.e., a complex idea resulting from a synthesis in one's mind). The

Figure 1. A Typology of Planning Behavior for Local School Districts

Planning Level		Specificity of Plan Objectives	Dominant-type Thinking	Time Span	Primary Actors Represent	A Benefit Derived	Level
System Planning	Political	Low	Non-bounded Rationality	Indefinite	Community and School District	Long-range Direction and Stability	1
	Operational	Explicit	Mixed: -Bounded -Non-bounded -Extra } Rationality	Target dates but Flexible	School System as a Whole	Basis for System Evaluation	2
Subsystem Planning (Program or Program Element)		Quantitative	Bounded Rationality	Precise	Activity Being Planned	Basis for Subsystem Evaluation	3

objectives at levels 2 and 3 are attributes of level 1 constructs which are believed to correlate highly with them. As we proceed from level two to level three (and lower in another model) the attributes become more behavioral and observable. They become more susceptible to measurement. Hence, the smaller the unit for which planning is taking place, the more specific becomes the statement of objectives and the more precise becomes statement of the time and the resources needed to achieve that objective. If no other means are available, the objectives can be kept in a related hierarchical order through the exercise of extra-rational thought.

The column in Figure 1. designating primary actor does not limit who can be involved on each level. It simply designates the perspective for each level of planning. For example, teachers can be involved in planning on level 1; however, their perspective here would not be their own subject and grade level. It would be the school district as a whole, and its relation to the society it serves. Similarly, a member of the community could be involved in planning on level 3; the perspective is important. He might be the president of a local industry assisting a teacher in the planning of activities for a ninth grade general science course. The plan might involve use of the facilities of his company by ninth grade science students.

A final word about typology: the planning model being developed by the Western New York PPBS Project assumes that level 1 planning already takes place in most school districts. The planning procedures being developed are not primarily directed toward that level of planning. The primary purpose of constructing a planning model for use by local school districts is to reduce the uncertainty about which activities a school district should sponsor as its leaders strive to achieve

level 1 objectives. In short, what procedures can we follow in making decisions that help us design better educational programs for the children we serve? The ultimate test of any administrative system for use by school districts should be the effect it has on the children in whose interest school district resources are being expended. Rational planning procedures should not only lead to more appropriate school district activities; but, as the typology indicates, the adoption of a specific plan before activity begins should facilitate the difficult task of evaluating to what extent we are accomplishing what we deem important. More specific notions about the success of particular education programs will in turn contribute to the planning of improved programs.

APPENDIX A

Program Structure: the program structure groups activities in a way that facilitates comparisons of the cost and effectiveness of alternative approaches to objectives. To serve this purpose, program classifications should be objective-oriented, grouping activities with common objectives or common outputs.

Normally, a program structure includes two levels of classifications; programs and program elements. These should be established in accordance with the following general criteria.

a. Programs - A program should provide a suitable framework for considering and resolving a major question of mission and scale of operations which are proper subjects for decision at the higher levels of management.

b. Program elements - A program element covers activities related directly to the production of a discrete output, or group of related outputs. Activities which contribute directly to the output should be included in the program element, even though they may be conducted within different organizations, or financed from different appropriations. Thus, program elements are the basic units of the program structure.

Program elements have these characteristics: (1) they should produce clearly-definable outputs, which are quantified wherever possible; (2) wherever feasible, the output of a program element should be an agency end-product - not an intermediate product that supports another element; and (3) the inputs of a program element should vary with changes in the level of output, but not necessarily proportionally.

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OTHER NOTES IN THIS SERIES

Number 1: "Introduction to Program Budgeting."

Reviews the history of governmental budgeting, traces the current interest in PPBS to the Defense Department, contains definitions of key terms in the PPBS lexicon, and focuses on some implications which PPBS has for education.

Number 2: "Program Budgeting in the Federal Government."

Examines the implementation of PPBS in the federal government with emphasis on Bureau of the Budget guidelines and specific questions about the resolution of important issues. Comments by executives of non-defense federal agencies are presented with a view toward deducing the applicability of PPBS to school districts.

Number 3: "Cost-Effectiveness Analysis: What Is It?"

Reviews a variety of definitions of cost-effectiveness analysis found in the literature, and examines in detail the elements of one model that can be followed in conducting a cost-effectiveness study.